

JOHN BARBARO

Rocky Mountain College
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EDUCATION

Postdoctoral Research Associate in Biochemistry and Pharmaceutical Chemistry,
The University of California, San Francisco, CA 1987–1990
Ph.D. in Organic Chemistry, *Texas A&M University*, College Station, Texas, 1986
B.A. in Chemistry, *The Catholic University of America*, Washington, DC, 1979

EMPLOYMENT

Professor (August 2012–present), Associate Professor (2007–2012),
Assistant Professor (2004–2007)
Rocky Mountain College, Billings, MT

Taught the following courses: the two-semester organic chemistry course sequence for chemistry majors and students preparing for graduate studies in the health sciences, the upper-level environmental chemistry course, an upper-level forensic chemistry course, upper-level seminars in medicinal chemistry, forensic chemistry, and environmental chemistry, a general education course on chemistry's role in and influence on history, a general education course on the chemistry of everyday life.

Responsible for teaching and coordinating the laboratory sections associated with the organic chemistry, environmental chemistry, and the chemistry of everyday life courses. General duties include teaching the laboratory section(s), designing and scheduling experiments, ordering reagents and equipment, supervising work-study students serving as the laboratory prep crews (1-2 students each semester), managing and disposing of chemical waste, maintaining and repairing departmental instrumentation.

Faculty Chair (2010-2011)

Chair of the Division of Science and Mathematics (2008-2010)

Member of the Personnel Policies Committee (2009–2011), Faculty Executive Committee (2008–2011), Faculty Evaluation Committee (2007–2008), Faculty Development Committee (2006–2008), Student Policy and Conduct Committee (SPCC) associated with the Physician Assistant Program (2005–2006).

Advise undergraduate science majors (8 students at present).

Design and upkeep of a web site for my undergraduate organic chemistry courses.

Assist with NMR spectrophotometer maintenance and instruction.

Faculty adviser to the RMC Chemistry Club (2005–present).

Associate Scholar and Director of the Undergraduate Organic Chemistry Laboratories

The University of Florida, Gainesville, FL 2001–2004

Taught seven classes of the organic chemistry sequence for chemistry majors and students preparing for medical and dental schools (from 75–250 students per class).

Responsible for supervising the daily operations of the laboratory classes associated with the undergraduate organic chemistry classes. General duties include scheduling experiments for each class during the quarter, supervising and training teaching assistants (19–33 per semester).

Design and maintenance of a web site for the undergraduate organic chemistry laboratory program. Developing web-based tutorials and animations for undergraduate organic chemistry lecture and laboratory classes. Overseeing the implementation of experiments using microwave heating.

Member of the Departmental Safety Committee and the Departmental Awards Committee. Graduation Marshal.

Director of the Undergraduate Organic Chemistry Laboratories

The University of Alabama at Birmingham, Birmingham, AL 1998–2001

Taught seventeen classes of the organic chemistry sequence for chemistry majors and students preparing for medical and dental schools (typically 40–90 students per class).

Taught a senior-level independent study course on enzyme mechanisms and drug interactions. Taught an Honors' seminar titled *Chemistry's Influence on History*.

Responsible for the daily operations of the laboratory classes associated with the undergraduate organic chemistry classes. General duties include scheduling experiments for each class during the quarter, supervising teaching assistants (8–10 per quarter).

Design and maintenance of a web site for the undergraduate organic chemistry program. Introduced the use of WebCT in the department for the undergraduate organic chemistry classes. Developing web-based tutorials for undergraduate organic chemistry.

Member of the Departmental Recruitment and Retention Committee, the Undergraduate Curriculum Development Committee, the Undergraduate Educational Focus Committee, and the Departmental Awards Committee.

Taught the organic chemistry portion of the University's MCAT review class.

Instructor/Academic Professional and Director of the Undergraduate Organic Laboratories

The University of Georgia, Athens, GA 1991–1998

Taught seventeen classes of the three quarter organic chemistry sequence for chemistry majors and students preparing for medical and dental schools (approximately 180 students per class), six sections of the two quarter organic chemistry class for students in the biological sciences (approximately 90 students per class), and five classes of a one quarter survey of organic chemistry class for students majoring in agriculture, forestry, nursing, and home economics (40–90 students per class).

Responsible for the daily operations of seven laboratory classes associated with the different organic classes (approximately 1200 students per year). General duties include scheduling experiments for each class during the quarter, ordering reagents and equipment,

supervising teaching assistants (20–25 per quarter) and the lab prep crews, managing and disposing of chemical waste.

Responsible for adapting the organic laboratories to microscale experiments.

Undergraduate Chemistry Adviser, 1996–1998.

Member of the Departmental Safety Committee, the Undergraduate Instrumentation Committee, and the Undergraduate Advising Committee. Emergency Planning Coordinator and Right-to Know Coordinator for the chemistry department.

Postdoctoral Research Associate

The University of California, San Francisco, CA 1987–1990

Purified the NAD⁺-dependent benzaldehyde dehydrogenase associated with the mandelate pathway of *Pseudomonas putida* and obtained the enzyme's N-terminal sequence for gene mapping. Performed preliminary kinetic and mechanistic studies of catalysis by the enzyme. Synthesized isotopically labeled phosphocreatine to be used for positional isotope exchange studies of creatine kinase catalysis.

Graduate Research Assistant, Graduate Teaching Assistant

Texas A&M University, College Station, TX 1982–1986

Studied the mechanisms of the hydration of a Vitamin B-1 model system and the hydrolysis of substrates by native and *N*-methylated α -chymotrypsin by using solvent isotope effects. Extensive experience in the techniques of mechanistic organic chemistry, organic synthesis, and enzyme kinetics.

PUBLICATIONS

Richard K. Hill and John Barbaro, *Experiments in Organic Chemistry*, Contemporary Publishing Company of Raleigh, Inc., 3rd edition, 2005.

John Barbaro and Merle Battiste, *Experiments for CHM 2211L and 2200L*, Contemporary Publishing Company of Raleigh, Inc., 1st edition, 2004.

Barbaro, J. "Design and Synthesis of Leukocyte Adhesion Inhibitors," *Current Topics in Organic Chemistry*, 2004, **8**, 883-902.

Richard K. Hill and John Barbaro, *Experiments in Organic Chemistry*, Contemporary Publishing Company of Raleigh, Inc., 2nd edition, 2000.

Silverman, L. P.; Barbaro, J. "Illustrating Newman Projections By Using Overhead Transparencies," *J. Chem. Ed.*, 1999, **76**, 630.

Richard K. Hill and John Barbaro, *Experiments in Organic Chemistry*, Contemporary Publishing Company of Raleigh, Inc., 1st edition, 1996.

Barbaro, J. "Orbital Bartending," *J. Chem. Ed.*, 1994, **71**, 1012.

Barbaro, J.; Gopalakrishnan, G.; Hogg, J. L. "Kinetic and Mechanistic Studies on the Hydration of 2-Acetyl-3,4-dimethylthiazolium Ion," *J. Org. Chem.* 1989, **54**, 4438–4443.

AWARDS

G. E. Philbrook Award for Outstanding Undergraduate Teaching, Northeast Georgia Section of the American Chemical Society, May 1998.

Undergraduate Teacher of the Year Award, University of Georgia Student Affiliates of the American Chemical Society, May 1998.

Undergraduate Teacher of the Year Award, University of Georgia Student Affiliates of the American Chemical Society, May 1997.

G. E. Philbrook Award for Outstanding Undergraduate Teaching, Northeast Georgia Section of the American Chemical Society, May 1994.

PROFESSIONAL ORGANIZATIONS

American Chemical Society
Phi Lambda Upsilon